theoretical contentions not only because they seem to be such important parts of this book but also because of a sense of their great importance in any discussion of the economics of international trade and finance. The study before us is valuable as a detailed and painstaking account of most interesting occurrences. It is in places suggestive and is not without value as evidence regarding cause and effect relationships. But the comment which the reviewer feels compelled to make is that we are unlikely to get very far in the inductive verification of economic theories when the theories themselves are not clearly conceived in their sometimes intricate but nevertheless significant ramifications.

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Bank Credit: A Study of the Principles and Factors Underlying Advances Made by Banks to Borrowers. By CHESTER ARTHUR PHILLIPS. (New York: The Macmillan Company. 1920. Pp. xiv, 374.)

The aim of this book is to give the student of banking an understanding of both its theoretical and practical aspects. The author approaches the subject from the point of view of the bank statement. After a brief introduction in which he discusses the nature of bank credit, which he defines as "credit extended by banks to borrowers" (p. 1), he shows how a bank statement is gradually built up in the course of the development of a bank's business and then discusses the relation between the different items. In this part of his exposition, which he entitles Quantitative Aspects of Bank Credit, he introduces a chapter on what he calls The Philosophy of Bank Credit in which the theory of the subject and the principal formulas he employs are developed.

Professor Phillips' contribution to this part of the subject is his criticism of the statement frequently made that an addition to a bank's reserves enables it to expand its loans to several times the amount of such addition; for example, if the reserve percentage is 25, to four times the amount, if it is 10, to ten times the amount, etc. On the contrary, Professor Phillips claims that the amount of loan expansion that can safely be made by the bank receiving the addition to its reserve is only *a little* in excess of such addition. He admits, however, that the proposition he is criticizing is correct if applied to all the banks of a system.

The basis of his argument is the claim that the new loans made by a bank in consequence of an addition to its reserve creates against it-

self adverse clearing-house balances of such magnitude as to take away from it most of the cash received. As he puts it (p. 40):

> The sudden acquisition of a substantial amount of reserve by a representative individual bank, other things remaining the same, tends to cause that bank to become out of tune with the banks in the system as a whole. As the individual bank increases its loans in order to reëstablish its normal reserve-deposits ratio, reserve is lost to other banks and the new reserve, split into small fragments, becomes dispersed among the banks of the system. Through the process of dispersion it comes to constitute the basis of a manifold loan expansion.

Professor Phillips traces this process of dispersion; works out formulas for the determination of the amount of loan expansion; and gives a detailed analysis of the interrelations of loans, deposits, and reserves.

Professor Phillips anticipates (in a manner not completely satisfying) the criticism certain to be made to his contention: namely, "that the new loans would result in no loss of cash by the lending bank because checks drawn upon the lending bank by its depositor-borrowers against the deposited proceeds of the new loans would be offset by the deposit in the lending bank of a corresponding amount of checks—received by its customers in the course of business—drawn upon other banks in consequence of loans made by those other banks to their depositor-borrowers" (p. 74). His answer is: "If all banks were expanding their loans at the same rate in connection with simultaneous additions to their reserves, the contention would be valid. But additions to the reserves of a banking system, except in the most extraordinary case, are made, at any given time, not by the deposit of cash simultaneously in all the banks of a system but by the deposit of funds in only a small proportion of the banks, whence they are scattered throughout the system" (p. 74).

The weakness of this reply consists in the fact that, in order to make the criticism valid, it is not necessary that additions be made simultaneously to the reserves of *all* the banks in the system but only to those with which the individual bank under consideration is doing business and that the expansion of the loans of the other banks in the system is not solely conditioned upon an addition to their reserves. There is usually, nearly always in fact, a fair margin of surplus reserves which may serve as protection for additional loans, and such additional loans may be, indeed are likely to be, stimulated by the business which caused the loan expansion in the individual bank whose operations are primarily under consideration.

In the judgment of the reviewer, Professor Phillips greatly exaggerates the amount of adverse clearing house balances likely to be occasioned by an expansion of loans and of what he calls "derivative deposits" because he fails to connect such expansion with the business

processes which underly them. The bookkeeping function of commercial banks is primary and fundamental and the amount of offsetting of credits on the books of a particular bank depends much more upon the character of the business of the bank's customers than it does upon the amount and sources of its reserves.

The second part of the book, entitled Qualitative Aspects of Bank Credit, includes a chapter in which are traced the changes since the Civil War in "the form of the bank borrower's obligation, the development of the note brokerage business, the rise of the bank credit department, the rise and expansion of the new business department, and the establishment and operation of the Federal Reserve system" (p. 123). This is followed by chapters in which is presented a "detailed analysis of the factors underlying and affecting the quality or soundness of bank advances" (p. 123). This part of the exposition centers about the typical credit statement of a borrower to his bank, and is based upon information derived from "correspondence and interviews with bankers and note brokers" and from "the Proceedings of the American Bankers Association, proceedings of the various state bankers associations, reports of the Comptroller of the Currency and banking periodicals." Professor Phillips has rendered a valuable service by digesting this material and rendering it available to students and bankers.

An appendix containing carefully thought out questions, exercises and problems and another containing forms of borrowers' statements recommended by the American Bankers Association and the report of its committee on credit forms adds to the usefulness of the book as a guide to students and a handbook for bankers.

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